SWANK, D

FACILITATING DISPERSED CAMPING ALONG A SCENIC HIGHWAY

David F. Swank
Recreation Forester
Kamas Ranger District
Wasatch-Cache National Forest
50 East Center
Kamas, Utah 84036
(801) 783-4338

Clemson Class of 1988

March 1989

This paper was prepared as a student project in partial fulfillment of the requirements of the Professional Development for Outdoor Recreation Management Program at Clemson University. It in no way reflects USDA Forest Service policy, nor are the opinions expressed those of anyone other than the author.

TABLE OF CONTENTS

	PAGE
ABSTRACT	i
EXECUTIVE SUMMARY	ii
I. INTRODUCTION AND STATEMENT OF PURPOSE	1
II. REVIEW OF LITERATURE	3
III. METHODOLOGY Carrying Capacity Site Inventory User Attitudes and Preferences	6
IV. ANALYSIS Zone Descriptions Code-A-Site Results Carrying Capacity Questionaires	9
V. DISCUSSION	16
VI. SUMMARY Dispersed Site Closure Schedule Road Improvement Schedule	20
ACKNOWLEDGMENTS	25
LITERATURE CITED	26
APPENDIX	28

1. Vicinity Map
2. Dispersed Campsite Locations Map
3. Zone 1 Map
4. Zone 2 Map
5. Zone 3 Map
6. Zone 4 Map
7. Zone 5 Map
8. Zone 6 Map
9. Individual Dispersed Site Capacities
10. Total Recreation Capacities
11. Random Numbers for Salt Lake City Resident Selections
12. SLC Questionaire Cover Letter
13. Random Salt Lake City Questionaire
14. On-Site Users Questionaire
15. Questionaire Photographs
16. Responses to Photo Statements
17. Alternate Dispersed Camping Areas Map

ABSTRACT

Author: David F. Swank
Recreation Forester
Kamas Ranger District
Box 68
Kamas, Utah 84036
(801) 783-4338

Title: Facilitating Dispersed Camping Along a Scenic Highway

Abstract: Since 1920 the Mirror Lake Highway has been an intensively used scenic corridor accommodating a broad spectrum of recreationists. Fourteen campgrounds and eleven other developed sites are strung along the 22-mile stretch of highway between Yellow Pine Campground and Lost Lake. In addition to these "developed recreation" sites are numerous "undeveloped" or dispersed sites. The dispersed sites have appeared wherever adequate space for a tent or trailer or road occurs. Many of the dispersed sites are within view of the highway.

Past management has recognized some aesthetic impacts of this intense undeveloped use, but no study has been made to determine the extent of use, its impacts on scenic values, or public opinion of this use. This paper addresses these issues and develops alternatives designed to enhance scenic values and meet the growing public need for dispersed camping.

Keywords: aesthetic impacts, dispersed camping, scenic, displaced

EXECUTIVE SUMMARY

Author: David F. Swank
Forester
Kamas Ranger District
Wasatch-Cache National Forest
50 E. Center
Kamas, Utah 84036
(801) 783-4338

Title: Facilitating Dispersed Camping Along a Scenic Highway

A recreation user survey focusing on visual quality perceptions was conducted to determine dispersed camping management needs for the Mirror Lake Highway. The survey showed a majority of users recognized dispersed campsites as having an adverse impact on highway aesthetics. Code-A-Site inventories done in 1979 and 1988 showed a large number of dispersed campsites along and in view of the highway. Calculated maximum carrying capacity for developed and dispersed camping was being exceeded.

A literature review was conducted to determine general dispersed camper characteristics and preferences, and recommended dispersed recreation management.

Based on recommendations drawn from literature, the user survey, Code-A-Site inventory, and carrying capacity data, a management plan was developed to close visually obtrusive campsites and provide attractive alternate areas for displaced campers.

I. INTRODUCTION AND STATEMENT OF PURPOSE

The Mirror Lake Highway is a high-use scenic travel route located between Kamas, Utah and Evanston, Wyoming. The 22-mile section between the Wasatch Cache National Forest boundary and Lost Creek Campground is the focus of this study as it receives the greatest amount and intensity of recreational use. This section has 12 developed campgrounds (total capacity 1950 PAOT), 2 picnic areas, and 4 scenic overlooks. Traffic counters record 44,000 vehicles per year on this section (U.D.O.T. 1988). There is a fairly constant elevational rise from 7,000 at the forest boundary to 10,000 at Lost Creek Campground.

In addition to the intense use of developed sites and the highway itself, dispersed camping along this route has historically been very popular. A 1979 Code-A-Site inventory revealed a large number of frequently used campsites within view of the highway. Recreational vehicles can be seen at many sites which are themselves not visible. Roads accessing dispersed sites are all along the highway. This dispersed use has appeared to have a significant impact on visual quality.

The highway has been assigned a Visual Quality Objective of Retention, an ROS class of Roaded Natural and it is a Sensitivity Level 1 Travelway. The highway is under consideration to become a Scenic Byway. The highway east and north of Soapstone Junction (12.7 miles of 22-mile segment) is to be designated part of the Utah Highway of Adventure.

The future popularity and use of the highway is expected to rise, especially considering the higher profile that scenic designations will undoubtedly cause.

Without the benefit of formal statistical data it has been assumed that the large majority of recreationists along the highway are from the Salt Lake City area. Since the early 1900's, Mirror Lake has been an attractive vacation destination for many people along the Wasatch Front. Scenic values have always played a major part in attracting visitors to the highway.

It has been evident to recreation managers of the highway that the heavy use and even crowded conditions may well be affecting visual quality. As RV popularity and use picked up since the mid-1970's, these large, prominent, brightly colored vehicles are found all along the scenic highway.

This study is focused on the dispersed camping along the highway. How is it affecting visual quality? What measures can managers take to mitigate the aesthetic impacts? What long term solutions are needed to preserve the scenic qualities of the highway?

The goal of this study is to provide dispersed camping opportunities while enhancing aesthetics along the highway. The specific objectives are to (1) assess the existing recreation use in terms of quantity and visual quality, (2) determine theoretical carrying capacity of the affected land base, (3) survey recreationists and the general public for their perceptions of dispersed camping , and (4) develop a management strategy to meet the goal.

II. REVIEW OF LITERATURE

There is a noticeable lack of research concerning the effect man's presence has on visual quality. The large body of information on visual quality relates to modifications of the environment by man. A wide variety of literature was reviewed spanning a number of subjects relating to dispersed recreation, visual quality, user experience and satisfaction, trends, and site management.

Value of Dispersed Recreation

Schreyer found recreation to be an attempt by individuals to fulfill needs not met otherwise. In measuring recreation value, then, it is necessary to determine satisfaction or fulfillment of needs rather than simply visitor days.

More and Buhyoff state that the recreation experience begins in the form of anticipation and expectation in advance of the activity. The management of information can affect visitor expectations.

Carlson found that dispersed sites were preferred over developed sites by most that use them. Dispersed camping was an important niche in recreation opportunities and provided unique experiences.

Visual Quality

Kaplan stated that because the visual environment is so important to us, the management of visual quality is particularly vulnerable to public scrutiny. Cole and Ranz suggested that it is important to explain visual quality objectives to the public so that they can understand why a campsite may be considered unacceptable while much greater visual impacts such as a timber sale are acceptable. Incorporating public input into the visual resource assessment should become a management objective.

Management Attitudes

Downing and Moutsinas studied manager perceptions and attitudes. A variety of recreation-related problems were identified by managers. Esthetic values were not among these, suggesting that visual management is a lesser priority than safety, health, law enforcement, pollution, site impacts, litter and a variety of others. Clark and others found that often times dispersed recreationists are not concerned about safety hazards or other values not related to the quality of experience.

Schreyer found that foresters are used to thinking of biological factors rather than enhancing experiences for visitors. Technical problems such as resource impacts are the focus of much effort, while the quality of user satisfaction goes unnoticed.

Dispersed Site Characteristics

In studying dispersed campers, Hendee and others found that 90% return to sites used before. Carlson states that many dispersed campers would go to developed sites if some site factors such as screening and distance between campsites were properly designed.

Hendee, Clark, and others found water to be a critical factor in dispersed site selection by campers. Litton states that water is viewed as a special and rare element of the landscape with a life both aesthetic and biotic.

Methodology

Considerations in questionnaire methodology were formulated by Hull and others. Pair comparison and rank ordering were studied with respect to scenic beauty. These methods allowed the observer to assess the landscape many times and weigh it against others.

Allen Watson, Forestry Sciences Lab, Missoula, provided much information about random sampling including sample size and random selection methods.

Kaplan found that people are highly capable of processing large amounts of information and making proper judgements. Photographs provide them with visual information to make rapid judgements and choices. Photos, therefore, are excellent tools for use in questionnaires.

Trends

McLellan suggests that demand is on the increase for activities such as camping. Camping is available to a broad economic segment of the population and opportunities can usually be found close to home. However, economic and political factors do not favor expansion of federal recreation programs.

Clark found that camping in dispersed areas will increase while use of developed sites will remain the same or possibly decrease.

Schreyer points out that the Baby Boom generation (born 1945-64) are reaching middle age. This group, responsible for the prominence of backpacking and back-country recreation of the early 1970's, are now desiring closer-to-roads recreation. Dispersed camping along roads is more attractive to them than in the past.

Schreyer also found that many outdoor recreationists are becoming increasingly tolerant of crowding. Other factors such as comfort and convenience are becoming more important to them than solitude.

III. METHODOLOGY

A variety of factors needed to be measured in order to adequately assess the impacts of dispersed camping along the highway. These included carrying capacity, site inventory, user attitudes and preferences. Use trends were determined in order to provide information to develop management alternatives.

Carrying Capacity

The ROS Users Guide was used to calculate approximate carrying capacities. Carrying capacity has been found to be elusive and difficult to formulate (Roggenbuck and Schreyer 1977). The guidelines presented in the Users Guide, however, provide insight into some use limitations that affect recreational experience.

Based on the Users Guide, capacities in the Roaded Natural class range from a high of 2.5 PAOT/acre to a low of 0.083 PAOT/acre. The highway influence area tends to be narrow (less than 1/2 mile wide), with fair to poor vegetative screening, and frequently sloped. Given these characteristics, a coefficient of 2.0 PAOT/acre is considered reasonable maximum carrying capacity.

The 22-mile highway segment traverses a variety of elevations, vegetative communities, landform characteristics and water influence areas. These natural elements combine to affect site attractiveness and create certain limitations on the ability of sites to provide a place for camping, to hide use, or to recover.

To provide a basis for evaluating use densities, the highway was segmented into 6 geographic zones. The zone maps are shown in appendices A-F. Developed sites were included in determining zone carrying capacities.

Site Inventory

A dispersed site inventory was conducted in 1979 using the Code-A-Site system. Code-A-Site is a widely used inventory process that measures both quantitative and qualitative site characteristics; however, it tends to lean more heavily toward qualitative factors such as estimating site conditions based on visual references (Clark 1988).

Other inventory systems such as Limits of Acceptable Change are available which lean heavily toward quantitative factors and use much more scientifically detailed measurements. However, because an inventory was already on hand, it was decided to use the same system again for purposes of comparison.

A weakness of Code-A-Site is that it relies heavily on personal judgement to determine extent and intensity of site use (Carlson, 1986 In this case, the 1979 and 1988 inventories were conducted by two different people. Photographs were taken to strengthen comparisons. With these considerations in mind, the Code-A-Site system was employed.

User Attitudes and Preferences

Managers need to know the preferences of users because this determines a manager's ability to satisfy them (Carlson 1986). The visitors along the highway needed to be contacted in an objective manner to obtain their opinions regarding visual quality. A 2-page questionnaire was developed to accomplish this (Appendix 14). The questionnaire consisted of three sections as follows:

1. Statements. Twelve statements relating to dispersed camping (5), primitive roads (3), crowding (3), and general Forest Service management (1) were presented and the respondent judged the statement as to whether or not he agreed.

2. Photographs. Three photos of typical dispersed campsites and one photo of a primitive road were shown the respondent. He then judged statements about the photos as to whether or not he agreed.

3. Demographics. A variety of information including age, gender, extent of camping, residence, etc. was obtained about each respondent.

The questionnaire was presented to 162 visitors at their campsites, along the highway, or at the ranger station.

It was determined that a random control group was needed in order to affirm the results of the visitor study. A computer-generated list of 300 random 6-digit numbers between 001001 and 256999 was obtained (Appendix 11). The 256-page Salt Lake City phone book was used to identify random respondents. The first 3 digits were the page number and the last 3 digits corresponded to a specific area, section, and name on that page. Questionnaires were sent to the 300 random names chosen. These questionnaires were the same as those presented to visitors except for deletion of the photos and photo statements. A cover letter was attached explaining the questionnaire and its value and encouraging a response. A self-addressed/stamped envelope was included. The random Salt Lake City mailing was followed up at 14 days with a phone call to non-responsive residents.

All the questionnaire responses were digitized and a computer-generated analysis obtained responding to a variety of queries.

IV. ANALYSIS

Zone Descriptions

The following is a summary of zone characteristics:

Zone	Adjacent Water	Developed Sites	Elevation	Characteristics
1	Beaver Creek (large, constant flow, fishing)	Yellow Pine C.G. Beaver Creek C.G. Shingle Creek C.G. Shingle Creek Picnic Ponderosa Group Camp Beaver Creek Admin.	7000-7600	gentle slopes large openings broad canyon poor Screening
2	Provo River (small river, fishing)	Pine Valley Group Lower Provo C.G.	7600	large sagebrush flats broad canyon poor screening
3	Provo River	Provo River Overlook	7600-7800	narrow canyon fair screening many trees rocky slopes
4	Provo River	Soapstone C.G. Shady Dell C.G. Cobblerest C.G. West Portal C.G. West Portal Gravel Pit	7800-8400	narrow canyon open poor screening steep slopes
5	Provo River	Slate Gorge Overlook Upper Provo Picnic Provo Falls Overlook	8400-9600	extremely narrow canyon steep slopes poor screening
6	Trial Lake Teapot Lake Lilly Lake Lost Lake	Trial Lake C.G. Lilly Lake C.G. Lost Creek C.G.	9600-10200	broad alpine meadows poor screening gentle slopes clumpy trees

Code-A-Site Results

The Code-A-Site inventory found a total of 84 sites. The sites were mapped on Appendices 2-8 and their capacities calculated (Appendix 9). Table 1 shows the 6 zones and associated dispersed campsite data.

TABLE 1

DISPERSED SITES PER MILE
AND
AVERAGE CAPACITY PER SITE

			DISPERSED CAMPSITES			
ZONE	ACRES	HIGHWAY MILES	TOTAL NUMBER	SITES PER MILE	TOTAL CAPACITY	AVE CAPACITY PER SITE
1	527	4.8	21	4.4	640 PAOT	30 PAOT
2	712	2.5	12	4.8	470 PAOT	39 PAOT
3	160	2.0	9	4.5	305 PAOT	34 PAOT
4	338	4.7	20	4.2	625 PAOT	31 PAOT
5	189	5.5	16	2.9	510 PAOT	32 PAOT
6	548	2.5	6	2.4	235 PAOT	39 PAOT
TOTALS	2474 ac	22.0 mi	84 sites	3.8/mi	2785 PAOT	33 PAOT

Zones 1-4 had a relatively constant number of dispersed sites per mile (4.2-4.8), while Zones 5 and 6 had a reduced average (2.4-2.9). Elevation may be the most important factor here as sites above 8,000 were quite sparse. The use season at the higher elevations (8,000'-10,000') is shorter, the nights are colder, and mosquitos are a greater problem because of numerous lakes, marshes and meadows.

The average site capacities are relatively constant and large (30-39 PAOT). Site sizes have not changed significantly since 1979. With respect to site condition, the 1979 photos showed greater litter and vegetative impacts than the 1988 photos. Overall dispersed use has likely declined, allowing the sites more rest and recovery time. Site recovery has been very slow and in most cases is minor.

TABLE 2 shows the comparison of site size from the 1979 and 1988 surveys with the sites segregated by whether they are in view of the highway.

TABLE 2

SIZES OF DISPERSED CAMPSITES

	SIZE			
	Small	Medium	Large	Very Large
Vehicle Spaces	1-2	3-5	6-9	10+
Seen From Highway '79	6	16	20	13
'88	6	17	21	12
Screened from Hwy '79	9	5	9	3
'88	4	14	7	3

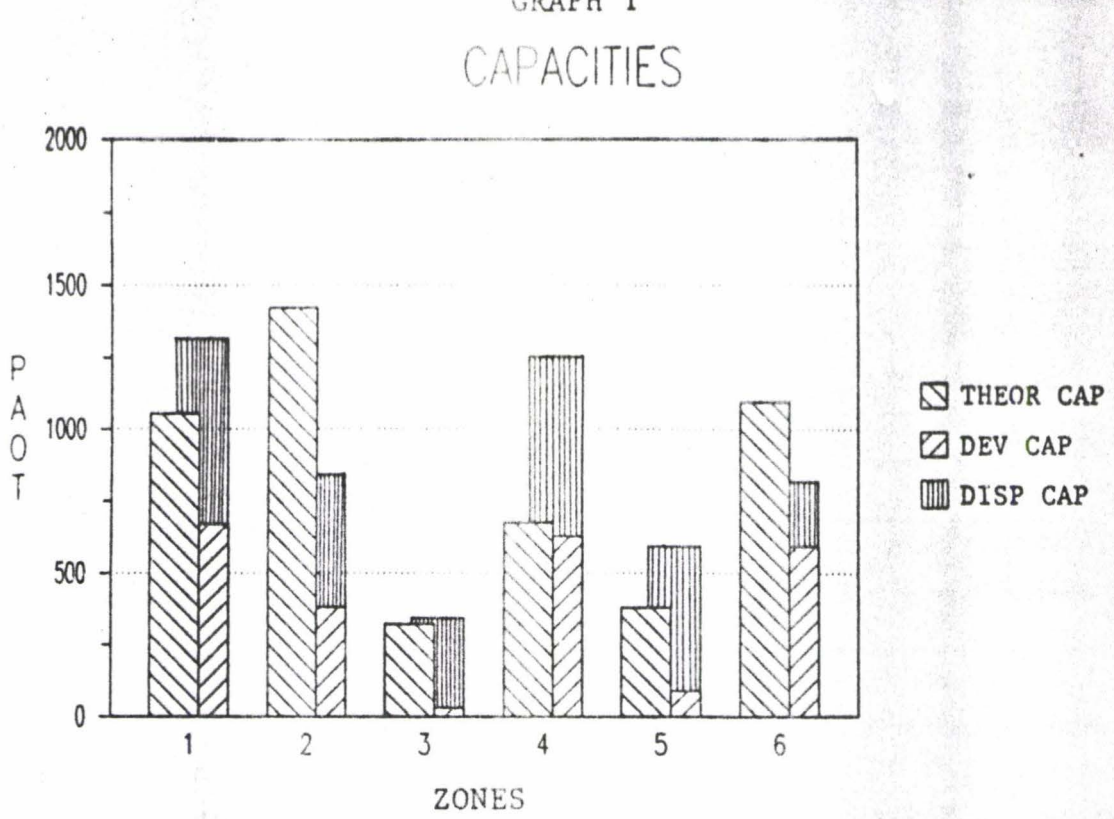
The survey indicated 6 sites inventoried in 1979 had been closed. A total of 5 sites were inventoried in 1988 which were not shown on the 1979 survey. These are not new, however, and in 1979 were either included with adjacent sites or just missed. There are 4 new sites since 1979.

The majority of the sites (66%-56) are within view of the highway. No significant changes appear in the number or size of sites since 1979. Except for some recovery due to reduced use, the dispersed sites are pretty much the same as they were in 1979. The majority of the sites are within view of the highway simply because the highway corridor is narrow with poor screening and leaves little room for dispersed use.

Carrying Capacity

Developed sites (campgrounds, picnic areas, and scenic overlooks) were plotted on the zone maps. Graph 1 shows maximum theoretical capacity versus actual capacities. As shown in the graph, the calculated maximum theoretical capacity is exceeded in Zones 1, 4, and 5. Zones 2 and 6 are well within their capacities. Zone 3 is currently at the maximum capacity.

GRAPH 1



Questionnaires

The following is a summary of the 300 questionnaires sent to random Salt Lake City residences:

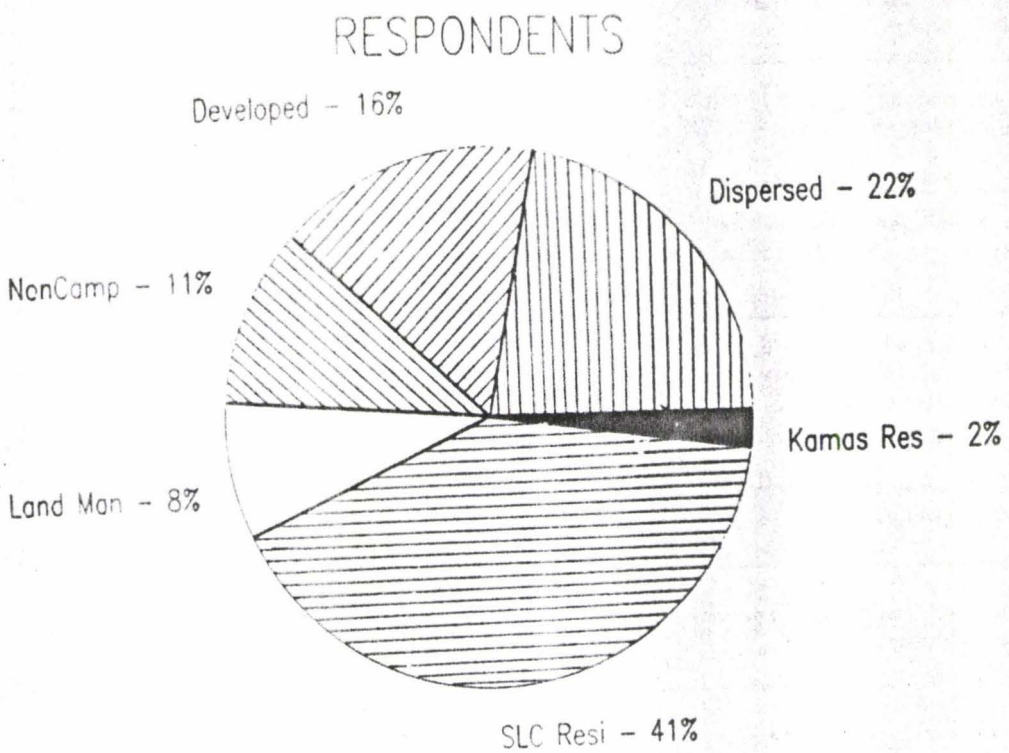
	Number	%
Received Valid Response	94	31
Invalid Response Received	18	6
Indicated No Interest	40	13
No Answer Received	113	38
Dead End-Moved/No Address	35	12

The 94 valid responses were analyzed along with 162 obtained from random users on-site. The computer analysis provided a large body of data. The respondents were categorized into 5 groups and the statements into 4 groups.

The 5 respondent groups are (1) dispersed campers, (2) developed site campers, (3) non-campers such as hikers, sightseers, picnickers, etc., (4) public land managers including Federal and State employees, and (5) random Salt Lake City residents.

The 5 respondent groups are (1) dispersed campers, (2) developed site campers, (3) non-campers such as hikers, sightseers, picnickers, etc., (4) public land managers including Federal and State employees, and (5) random Salt Lake City residents. Twenty-two responses did not indicate category of resondent. Graph 2 shows the individual group sizes.

GRAPH 2

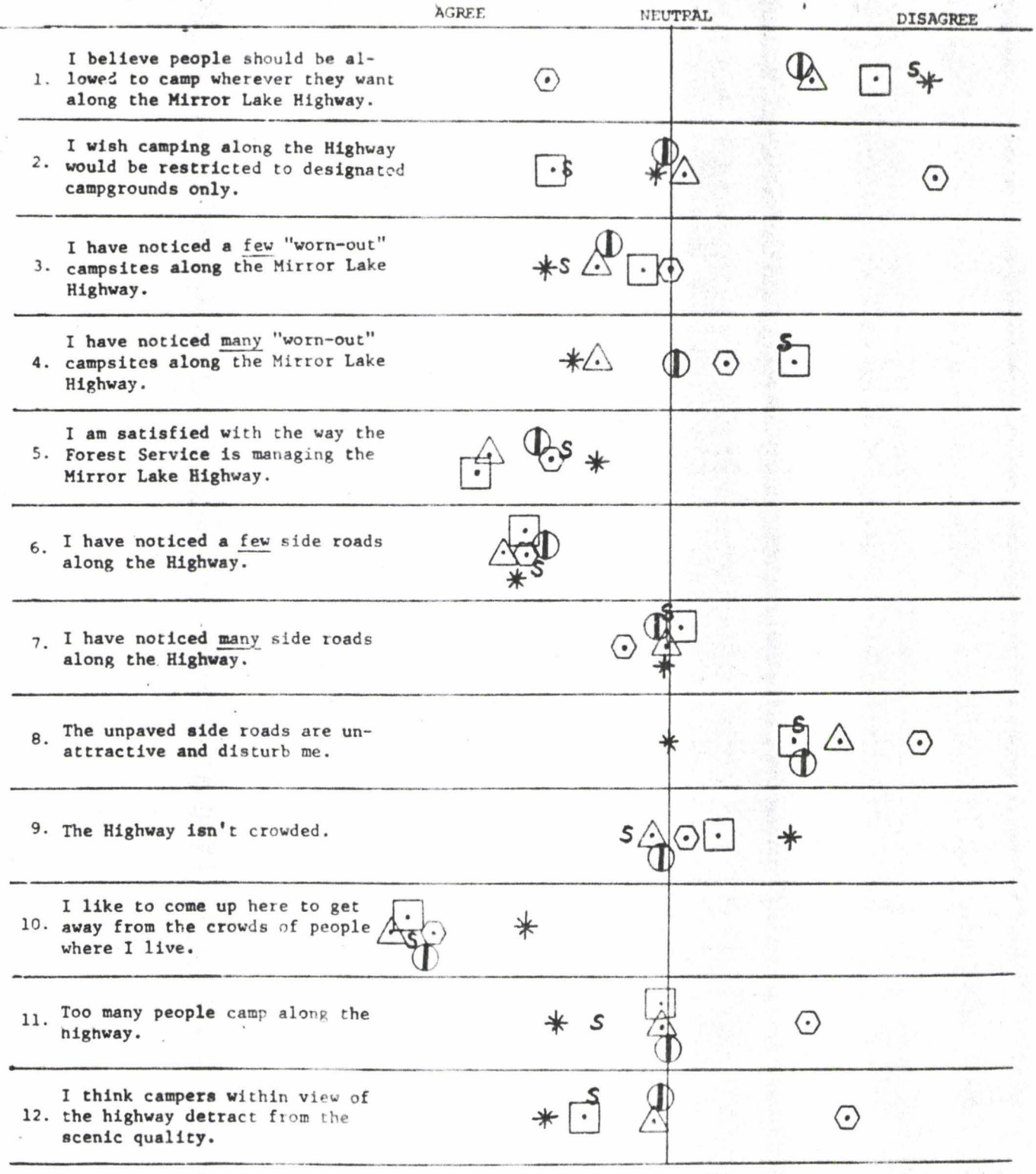


The respondent groups were independently analyzed with respect to demographics and statement responses. Graph 3 shows mean averages of responses to the statements. Responses to the photo statements are shown in Appendix 16. General observations about the respondent groups follow the graph.

RESPONSES TO
STATEMENTS

MEAN AVERAGES OF GROUP RESPONSES

All Groups Dispersed Campers Developed Site Campers Non-Campers
Land Managers S Random Salt Lake City Residents


AGREE
NEUTRAL
DISAGREE
1. I believe people should be allowed to camp wherever they want along the Mirror Lake Highway.
2. I wish camping along the Highway would be restricted to designated campgrounds only.
3. I have noticed a few "worn-out" campsites along the Mirror Lake Highway.
4. I have noticed many "worn-out" campsites along the Mirror Lake Highway.
5. I am satisfied with the way the Forest Service is managing the Mirror Lake Highway.
6. I have noticed a few side roads along the Highway.
7. I have noticed many side roads along the Highway.
8. The unpaved side roads are unattractive and disturb me.
9. The Highway isn't crowded.
10. I like to come up here to get away from the crowds of people where I live.
11. Too many people camp along the highway.
12. I think campers within view of the highway detract from the scenic quality.

Dispersed Campers. 51 responses (22%). This was the only group that felt strongly that camping should continue in the liberalized wherever-you-want-to vein as it has been. This group showed little interest in campsite visibility or condition. They disagreed that campers detract from the scenic quality. They felt that crowding was not a problem. Responding to the photographs, they felt that the campsites were attractive.

Developed Site Campers. 37 responses (16%). Campground campers favored restrictions on dispersed camping although they would not require campground camping only. This group was unconcerned about undeveloped side roads. Crowding was not a problem. They felt that the pictured campsites were attractive.

Non-Campers. 26 responses (11%). The non-camping respondents were among the most conservative regarding dispersed campsites. They felt rather strongly that campsite locations should be restricted and managed. They also felt camping should be restricted to developed campgrounds only. Crowding did not seem to be a problem. Primitive side roads did not bother the non-campers. This group was generally neutral on the photo statements.

Land Managers. 18 responses (8%). Forest Service employees and a few State land managers formed this category. They were the most critical of visible dispersed campsites, side roads and crowding. They felt strongly that dispersed campsites needed to be actively managed and restricted. They felt that there were too many campers along the highway. They did not favor the campsites on the photos.

Random Salt Lake City Residents. 98 responses (41%). This group might be expected to contain elements of all the above groups, since this was a purely random sample. Surprisingly, this group was strongly opinionated, desiring dispersed camping to be closely managed and restricted. They were the only group other than Land Managers, which observed "worn out" campsites along the highway. They felt campers within view of the highway detracted from scenic quality. They tended to be neutral on side roads and crowding.

7. DISCUSSION

The analysis centers on two general concerns: (1) how much recreation can the highway corridor reasonably carry, and (2) how do our recreationists perceive the visual impacts of dispersed camping.

Carrying Capacity

From the Code-A-Site Inventory and the Zone Analysis, it is evident that the dispersed use is exceeding the theoretical capacity of the highway corridor. The capacities of Zones 1, 4 and 5 are far exceeded. Zones 2 and 6 have room for more dispersed use, if the theoretical capacity is the level at which the land is to be managed. Poor screening in all zones would limit use, if visual quality is to be maintained or improved.

The total capacity in each zone should not exceed the maximum theoretical capacity. This would require diverting some dispersed camping in Zones 1, 4 and 5 to other zones or outside the highway corridor. Zones 2 and 6 have relatively small unutilized capacities. Zone 3 is right at the maximum theoretical limit.

User Survey

A general conclusion about the opinion survey is that the public prefers active management of dispersed camping. A large majority agreed that camping should not be allowed just anywhere. They also indicated that campers in view of the highway detract from the scenic quality.

From the public responses it can be concluded that occupied dispersed campsites do impact visual quality. Visual impacts often suggest the presence of deep-seated environmental problems (Magill, et. al.). The public recognition of visual impacts suggests that environmental problems exist. This was verified by the land manager responses indicating the presence of many "worn out" campsites, many side roads, and concern about crowding.

Management

The historical management of the highway parallels research conclusions about the attitudes of managers. Some managers have believed that dispersed campsites are used because there are insufficient developed campsites (Clark, et. al.). Studies indicate this is not the case. Many dispersed users prefer either minimally developed campgrounds or dispersed areas (Clark). Dispersed users along the highway will continue to return to dispersed sites because that is what they want.

Managers who work with landscape aesthetics grapple with subjective problems such as perceptual values of a lay public or professional group (Litton). In a study of managers perceptions of dispersed recreation, the impact on visual quality was never mentioned as a potential problem (Downing and Moutsinas). A related concern is that unrestricted and haphazard recreation management can result in the exclusion of certain recreation experiences (Roggenbuck and Schreyer).

Along this scenic highway aesthetic values have always been a major attraction. Enhancing these will improve the recreation experience for a majority of users. Carlson found that not perceiving being crowded is the most common desirable characteristic given for liking dispersed sites. Therefore, reducing camping along the highway may improve the quality of dispersed use as well as aesthetics. However, if restrictions are imposed on dispersed camping, some users will be displaced, and their recreation experience may be reduced.

Managers have tried resting heavily used sites. Studies found that site resting is counterproductive. Little recovery was noted on rested sites while at the same time new sites were being created. Recovery was much slower than deterioration (Cole and Ranz). Sites selected for closure should be permanently closed with the anticipation that new sites will be found by displaced campers.

What people actually care about in the landscape is not adequately reflected in many management decisions (Kaplan). The survey indicates users are quite concerned about aesthetics. Converting their concerns into

solid management decisions will require challenging thought. Alternate dispersed campsite areas will need to be identified and appropriately signed and managed to attract otherwise displaced campers. Efforts to inform and educate the public are necessary to gain compliance with management objectives.

Alternatives

Three feasible alternatives are offered. These alternatives provide for displaced recreationists and are within the capability of the land.

1. Continue Historic Management. Without taking any steps to divert or manage dispersed use, dispersed camping could be expected to remain at current levels or possibly decline slightly. The recent trend toward self-contained RV's is expected to continue; therefore, visually subordinate vehicles are not expected on the scene in the future.

   The highest environmental impact from the dispersed camping probably occurred in the 1960's or 1970's as suggested by the 1979 Code-A-Site survey. The campsite size and condition is not expected to change significantly if no action is taken.

2. Reduce Dispersed Camping to Maximum Theoretical Capacities. Zones 1, 4, and 5 would be directly affected. This alternative would require closing selected dispersed campsites, controlling use in other sites, and monitoring displacement of campers. Alternate dispersed areas in Zone 2 or away from the highway corridor would need to be provided.

   Displaced campers may tend to use sites near those closed. Proper signing to explain closures and to direct use to comparable alternate sites would be necessary.

3. Restrict Dispersed Camping to Sites Out of View of the Highway. This would eliminate 66% (56) of all existing dispersed sites. A large majority of dispersed campers would be displaced. Providing alternate campsites would require a major effort in signing, road improvement,

and monitoring. This alternative would be feasible only if carried out over an extended period of time, such as 5-10 years.

Alternate dispersed areas might include the Broadhead Meadows Road, Pine Valley, Murdock Basin Road, and Spring Canyon Road. The Spring Canyon Road is especially attractive as it forms a loop through scenic areas. This road is in poor condition, however, and would require major capital investment to bring it up to a useable standard.

Alternative Recommendation

It is recommended that all the alternatives be implemented to some extent. Alternative 1 should be used in Zones 2 and 6, where dispersed camping has not caused the Max Theoretical Capacity to be exceeded. No immediate action is deemed necessary here.

Alternative 2 (reduction to capacity) should be implemented in Zones 1,4 and 5 on an incremental basis over a 3-5 year period. Smaller sites close to the highway could be closed first, along with a few larger sites. Intensive monitoring will be necessary to make sure displaced users move to under-utilized areas.

Alternative 3 should be the long-term goal for the highway. This alternative would significantly increase visual quality. It may require 5-10 years to implement and a commitment of funds for road improvement.

As the alternatives are implemented it is imperative that displaced campers be provided attractive alternative sites. These sites must be in place and ready before campers are directed away from sites along the highway.

VI. SUMMARY

The study concluded that based on Code-A-Site capacities and user survey information, aesthetic quality along the highway could and should be improved. Improvements could be made by closing visually obtrusive campsites and offering displaced campers attractive alternate areas.

Past management of dispersed camping along the highway has taken a low profile. Campers typically can camp anywhere they desire with few exceptions. This has led to numerous dispersed campsites adjacent to and within view of the highway. This historic use is well established. Many campers and groups return to the same site summer after summer. Changing these patterns will require time and planned public involvement and education.

The recommendations involve immediate, short-term, and long-term actions. If effectively carried out, the highway will have much improved aesthetics in the future. Implementation of these actions will require a detailed action plan and a monitoring plan. The following recommended action plan is designed to meet the alternatives. The District Ranger will be responsible for insuring the plan is carried out.

The Action Plan includes two parts: Dispersed Site Closure Schedule and Road Improvement Schedule. The Site Closure Schedule prioritizes signing and site closures. This will result in closing the most visually prominent sites first and spreading the closures out over a reasonable period of time. The Road Improvement Plan coincides with the Site Closure Plan to provide for campers displaced by the closures. Appendix 17 shows the alternate dispersed camping areas served by the roads to be improved.

Signing will explain reasons for closures and direct campers to suitable alternative sites.

DISPERSED SITE CLOSURE SCHEDULE

S-Signed For Closure C-Closed & Obliterated

ZONE	SITE	CAPACITY PAOT	1989	1990	1991	1992	ZONE ALTERNATE CAMPSITE LOCATIONS
1	3	40	S	C			Sites 5, 6, 14,
	4	40		S	C		Pine Valley
	10	30	S	C			
	11	10			S	C	
	12	15		S		C	
	13	10			S	C	
	15	25		S	C		
	17	50			S	C	
	100	40			S	C	
	102	10	S	C			
2	26	15	S	C			Pine Valley
3	36	15		S	C		Pine Valley
	38	40		S	C		North Fork
	40	65			S	C	
	41	60	S	C			
	104	25		S	C		
4	45	30		S	C		Spring Canyon
	46	10		S	C		Murdock Basin
	47	20	S	C			
	48	10	S	C			
	49	40			S	C	
	51	30	S	C			
	57	35			S	C	
	60	10		S	C		
4	61	40		S	C		
	62	90	S	S	C		
	63	50		S	C		
	64	30			S	C	
	65	25			S	C	
	66	30			S	C	
	103	20	S	C			
5	67	35			S	C	Murdock Basin
	68	25			S	C	Broadhead Meadows,
	69	20			S	C	Spring Canyon
	70	10			S	C	
	71	25			S	C	
	73	25			S	C	
	76	10		S	C		
	77	85	S	S	C		
	78	50	S	C			
	79	10	S	C			
	80	45	S	C			

DISPERSED SITE CLOSURE SCHEDULE (CONTINUED)

S-Signed For Closure C-Closed & Obliterated

ZONE	SITE	CAPACITY PAOT	1989	1990	1991	1992	ZONE ALTERNATE CAMPSITE LOCATIONS
5	82	35	S	C			
	84	30		S	C		
	85	25		S	C		
6	87	10	S	C			Spring Canyon, Site 91
	88	30	S	C			
	89	10		S	C		
	90	35	S	S	C		

ROAD IMPROVEMENT SCHEDULE
TO FACILTATE ALTERNATE DISPERSED CAMPING

YEAR	ROAD IMPROVEMENT
1989	1. Pine Valley flats road improvement 2. North Fork Road improvement 3. Spring Canyon Road improvement (1 mi.) 4. Improve roads into Sites 30, 34, 83, 91, 101
1990	1. Continue Spring Canyon Road improvement (2 mi.) 2. Improve Broadhead Meadows Road (1 mi.) 3. Improve roads into Sites 5, 6, 35
1991	1. Continue Spring Canyon Road improvement (2 mi.) 2. Continue Broadhead Meadows Road improvement (2 mi.)
1992	1. Spring Canyon Road improvement (3 mi.)

The Site Closure Plan will reduce total recreation capacity in each zone to below the maximum theoretical capacity. Attractive dispersed campsites will be provided in the alternate areas. The planned site closures and road improvements will have a direct and positive impact on the visual quality along the highway. Follow-up monitoring on the effects of the closures is necessary to insure public dispersed camping needs are being met.

The Mirror Lake Highway is an attractive scenic corridor. Managing the highway to maximize the scenic values must be a high management priority. Helping recreationists fulfill their needs for scenic values and other uses such as camping has been the focus of this study.

ACKNOWLEDGMENTS

A number of people contributed to this project. A special thanks to the few listed below.

Connie Moya conducted the 1988 Code-A-Site inventory with Lynda Kirkham assisting. Connie, Lynda, and Randy Taylor conducted the on-site surveys.

Kim Richardson, Nancy Blazzard, and Ileene Atkinson typed and mailed the Salt Lake City questionnaires. They followed up with lots of phone calls.

Cary McDonald, Clemson-PRTM, ran the statistical analysis of the questionnaires. Chuck Frank provided computer expertise.

Additional support and advice was received from Bob Cron, Fran McElwain, Frank Grover, and Clark Ostergaard.

And finally, Kaye Woolstenhulme typed many hours and assisted in editing the report.

LITERATURE CITED

Carlson,J.M. 1986. Dispersed Recreation Use Along the Blue Lakes Road. Utah State University Recreation Short Course. 30 p.

Clark,R.N.,R.W.Koch,M.L.Hogans,H.H.Christenson, and J.C.Hendee. 1984. The Value of Roaded, Multiple Use Areas as Recreation Sites in Three National Forests of the Pacific Northwest. USDA Forest Service Research Paper PNW-319, Pacific Northwest Forest and Range Experiment Station. 40 p.

Cole,D.N., and B.Rantz. 1983. Temporary Campsite Closures in the Selway-Bitterroot Wilderness. Journal of Forestry, 8(11): 729-732.

Crawford,A.B., and D.F.Peterson. 1974. Criteria for the Determination of Recreational Carrying Capacity in the Colorado River Basin. In: Environmental Management in the Colorado River Basin. Utah State University Press. Logan. p 82-101.

Downing,K.B., and C.M.Moutsinas. 1978. Managers Views of Dispersed Recreation Along Forest Roads. Journal of Forestry 76(9): 583-585.

Hendee,J.C., M.L.Hogans, and R.W.Koch. 1976. Dispersed Recreation on Three Forest Road Systems in Washington and Oregon: First Year Data. USDA Forest Service Research Note RNW 280, Pacific Northwest Forest and Range Experiment Station. 21 p.

Hendee,J.C., R.N.Clark, M.L.Hogans, D.Wood and R.W.Koch. 1976. Code-A-Site: A System for Inventory of Dispersed Recreation Sites in Roaded Areas, Back Country, and Wilderness. Forest Service Research Paper PNW-209, Pacific Northwest Forest and Range Experiment Station. 33 p.

Hull,R.B., G.J.Buhyoff and T.C.Daniel. 1984. Measurement of Scenic Beauty: The Law of Comparative Judgement and Scenic Beauty Estimation Procedures. Forest Science, Vol.30, No.4, Dec.1984. p 1084-1096.

Kaplan,R. 1979. Visual Resources and the Public: An Empirical Approach. Forest Service Technical Report PSW 35. p 209-216.

_____. Land and Resource Management Plan. U.S.D.A. Forest Service, Wasatch-Cache National Forest. 1985.

Litton,R.B. 1982. Visual Assessment of Natural Landscapes. Western Geographical Series Vol. 20. University of Victoria Press. Victoria,B.C. p 97-115.

Magill,A.W., R.A.Rowntree and R.O.Brush. 1979. Visual Impacts in the Urban-Wildland Interface. Forest Service General Technical Report PSW 35. p 25-30.

McLellan, Gina. 1986. What The Trends Tell Us. Parks and Recreation, May 1986. p 45-48.

More,T.A., and G.J.Buhyoff. 1979. Managing Recreation Areas for Quality User Experiences: A Theorectical Framework, USDA Forest Service Research Paper NE 432. Northest Forest Experiment Station. 13 p.

_____. National Forest Landscape Management Volume 2, Chapter 1. U.S.D.A. Forest Service Agricultural Handbook 462. April 1974.

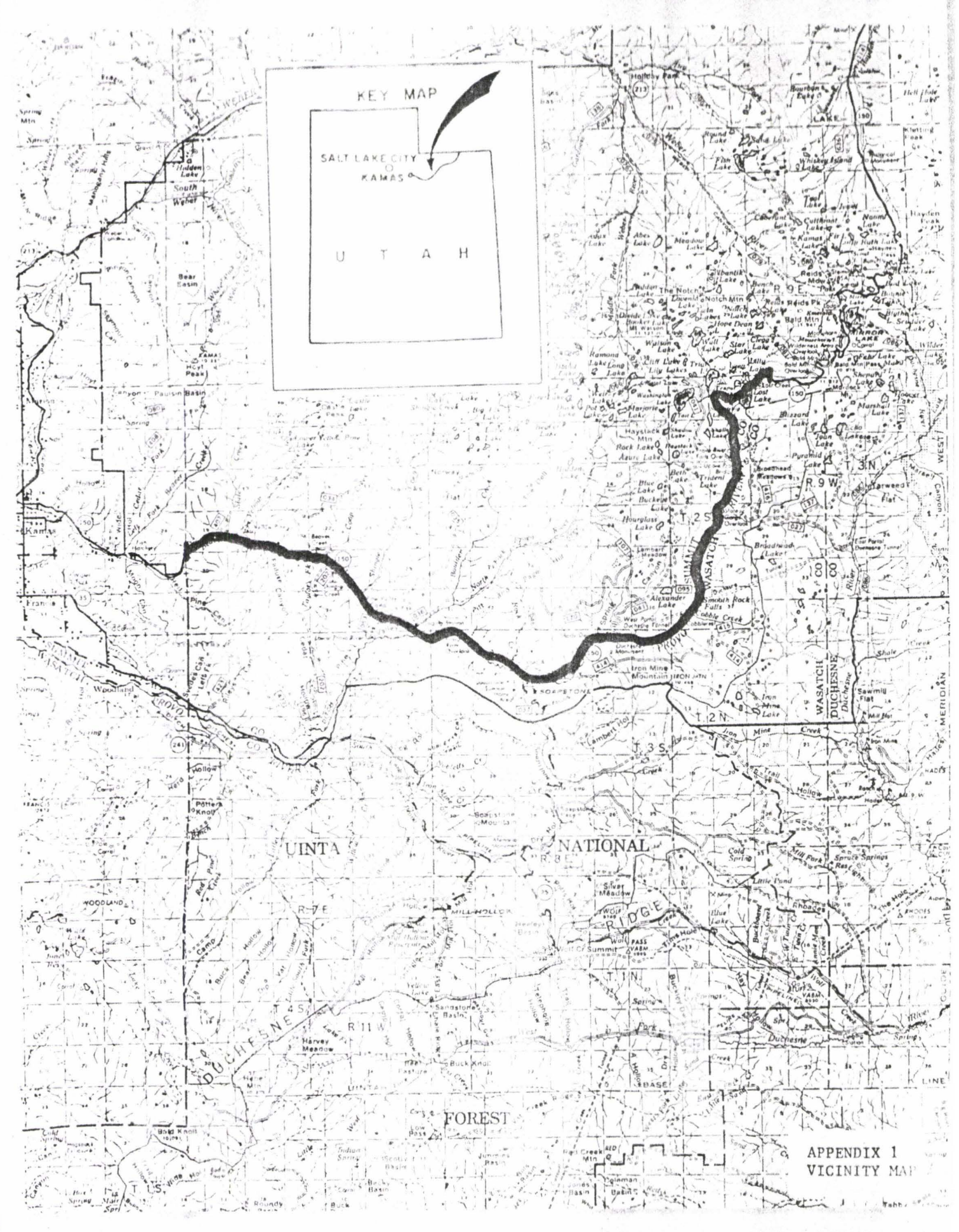
_____. Outdoor Recreation In a Nation of Communities. Report of the Task Force on Outdoor Recreation Resources and Opportunities to the Domestic Policy Council. July 1988. U.S. Government Printing Office. 169 p.

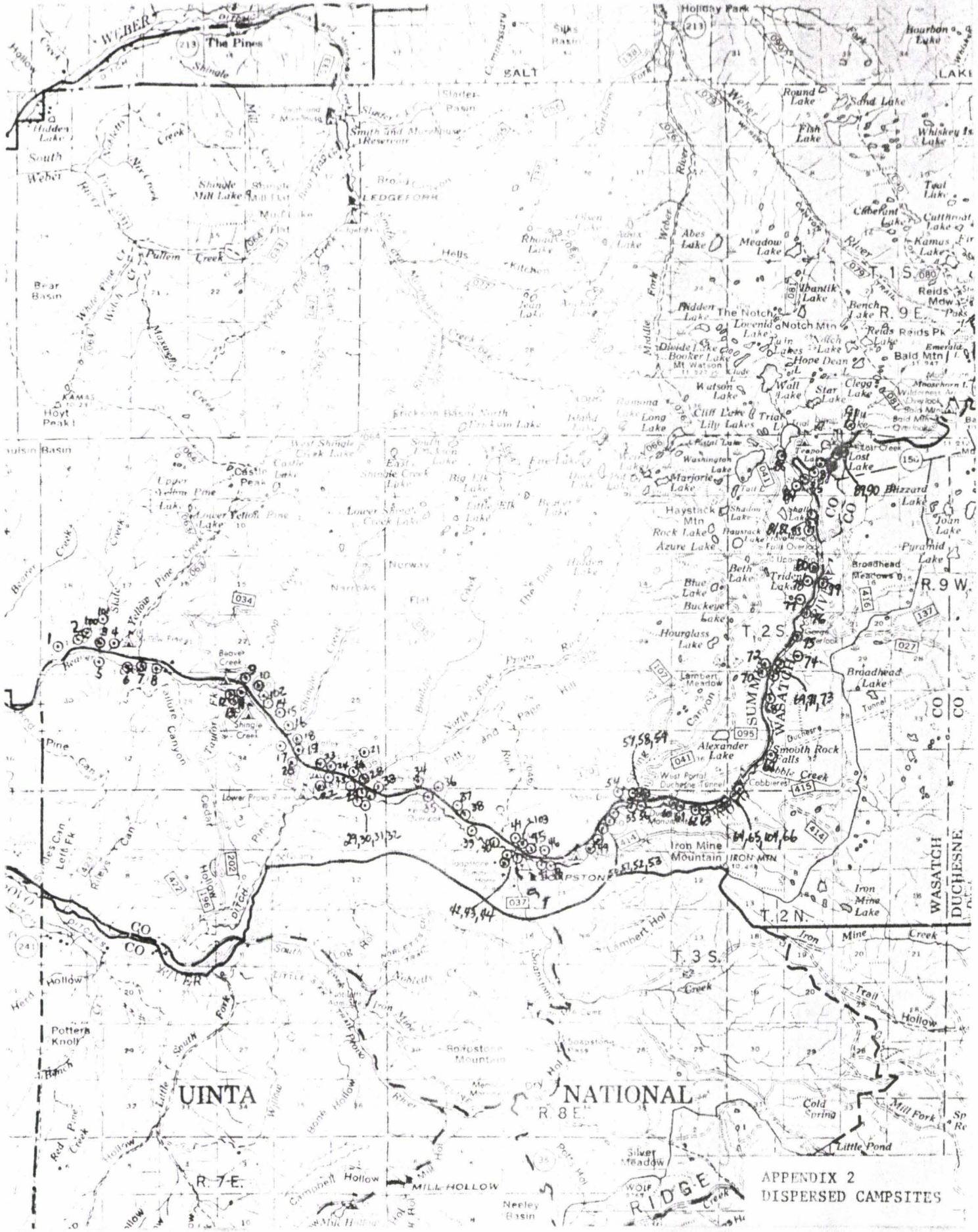
Roggenbuck,J.O., and R.M.Schreyer. 1977. Relations Between River Trip Motives and Perception of Crowding, Management Preference, and Experience Satisfaction. p 359-364 in Proceedings: River Recreation Management and Research Symposium. USDA Forest Service General Technical Report NC-28, North Central Forest Experiment Station.

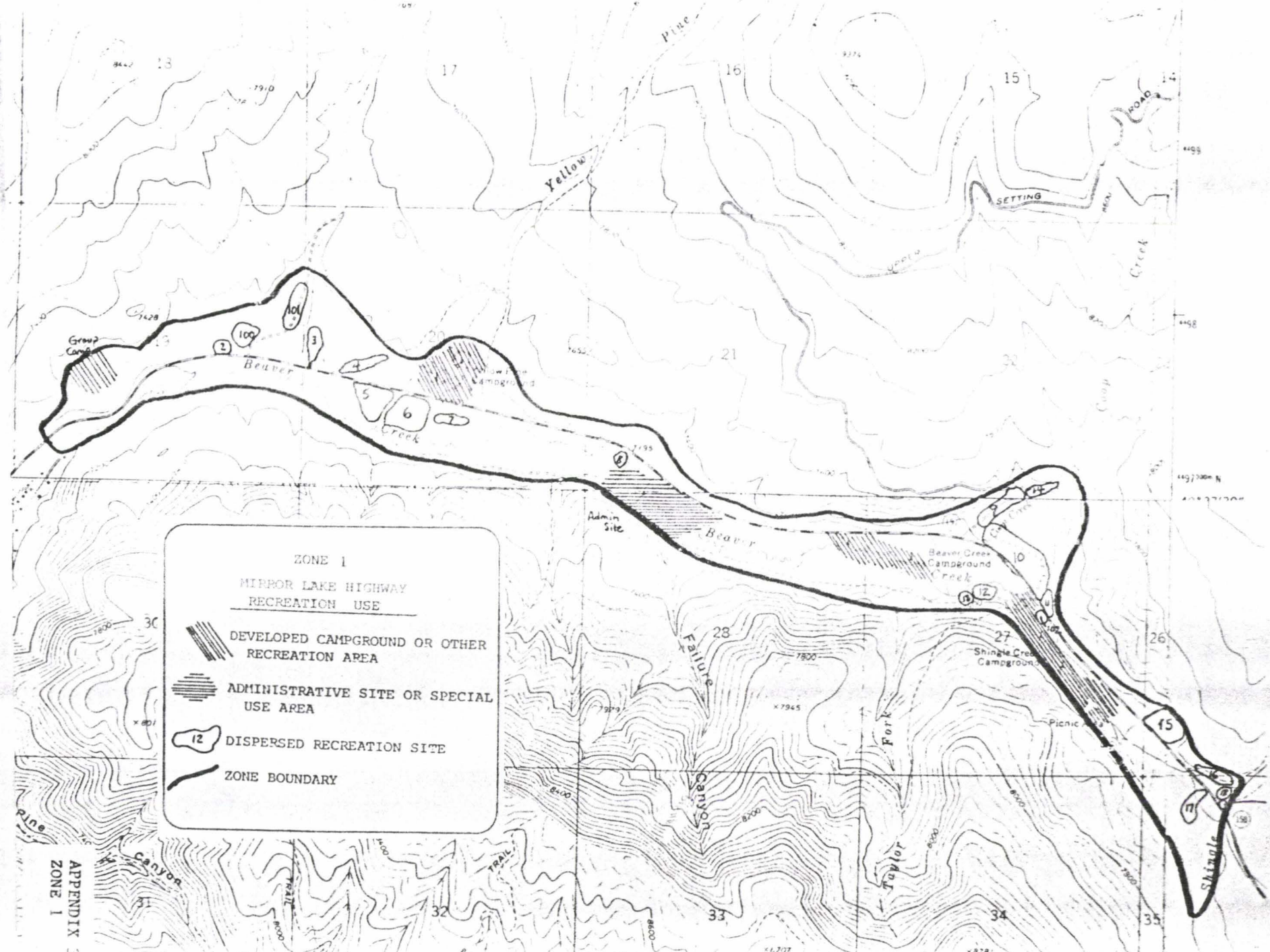
_____. ROS Users Guide. U.S.D.A. Forest Service.

Schreyer,R.M. 1980. Survey Research in Recreation Management - Pitfalls and Potentials. Journal of Forestry 78:338-340.

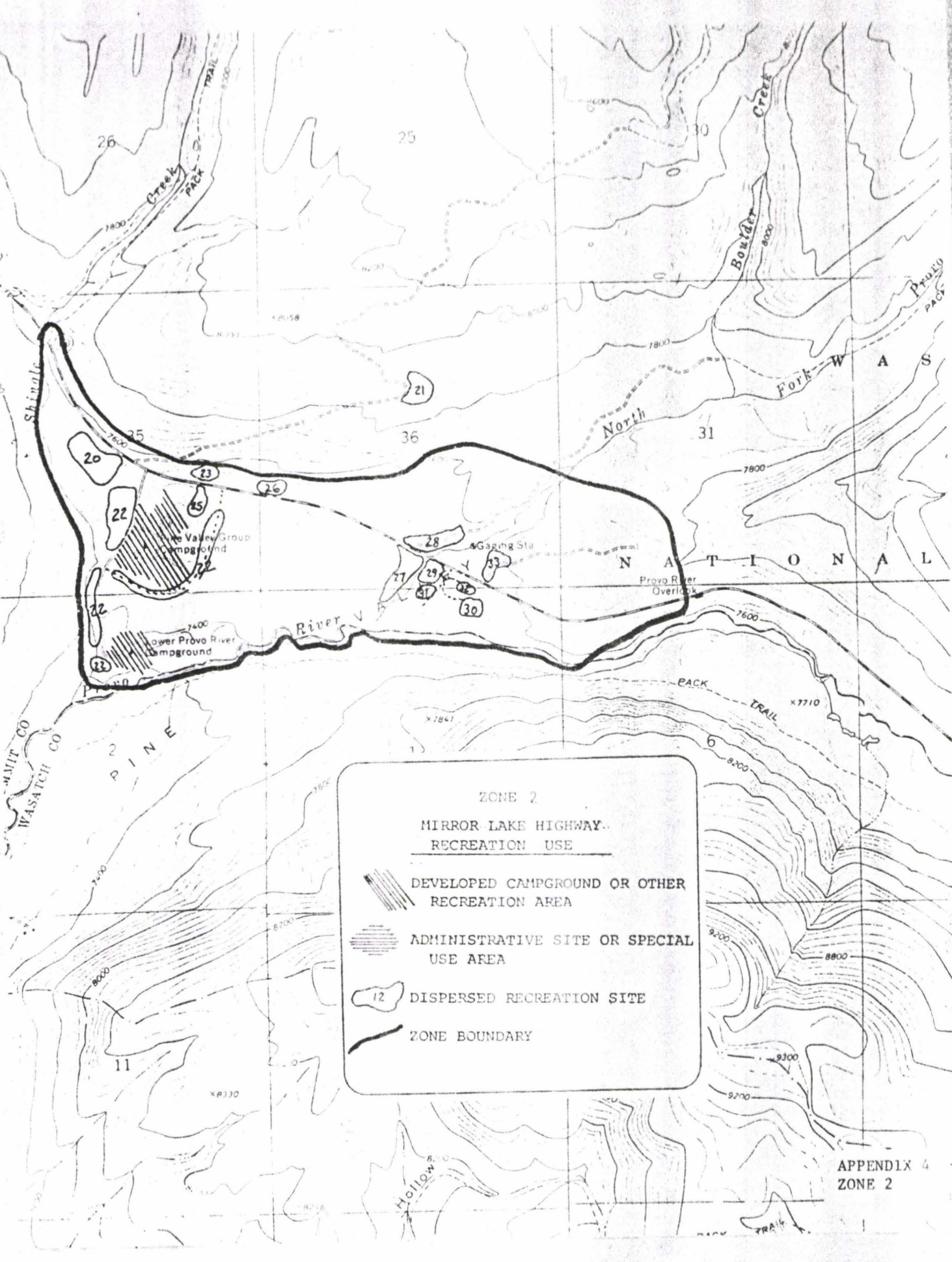
_____. Traffic on Utah Highways. Utah Department of Transportation. 1987. 64 p.


KEY MAP
SALT LAKE CITY
KAMAS
U T A H
APPENDIX 1
VICINITY MAP

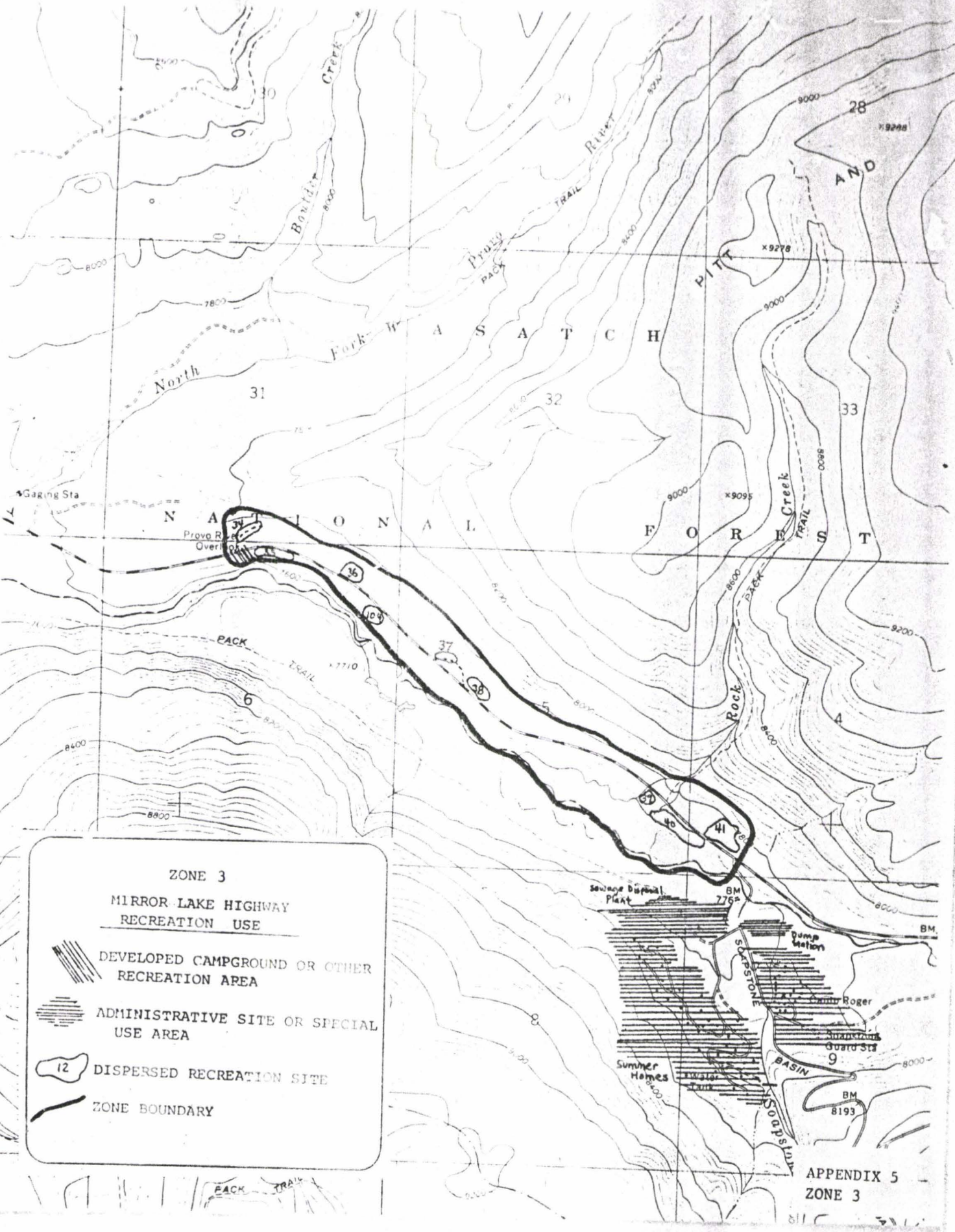

WEBER
The Pines
SALT
Holiday Park
Bourbon Lake
Round Lake
Fish Lake
Whiskey Is. Lake
Trail Lake
Cutthroat Lake
Kamas Lake
Meadow Lake
Abes Lake
Ubantik Lake
Bench Lake
Reids Mdw.
Reids Pk
Bald Mtn
The Notch
Notch Mtn
Lovenia Lake
Hidden Lake
Divide Lake
Booker Lake
Mt Watson
Hope Dean
Watson Lake
Wall Lake
Star Lake
Clegg Lake
Ramona Lake
Long Lake
Cliff Lake
Lily Lakes
Trial Lake
Washington Lake
Marjorie Lake
Lost Lake
Blizzard Lake
Haystack Mtn
Rock Lake
Azure Lake
Pyramid Lake
Broadhead Meadows
Beth Lake
Blue Lake
Buckeye Lake
Hourglass Lake
Lambert Meadow
Broadhead Lake
Alexander Lake
Smooth Rock Falls
Cobblestone Creek
West Portal Duchesne Tunnel
Iron Mine Mountain
IRON MTN
Iron Mine Lake
Iron Mine Creek
Trail Hollow
Cold Spring
Mill Fork
Little Pond
Silver Meadow
Neeley Basin
Wolf Creek
Ridge
Potter Knoll
Red Pine Creek
Campbell Hollow
MILL HOLLOW
Bonanza
Rabbitstone Mountain
Lambert Hollow
Shingle Creek
Beaver Creek
Fellows Canyon
Pine Canyon
Cedar Pine Can.
Riley's Can.
Left Fk
Upper Yellow Pine Lake
Lower Yellow Pine Lake
Castle Peak
Hoyt Peak
Bear Basin
South Weber
Pullem Creek
Shingle Mill Lake
Smith and Morehouse Reservoir
LEDGEFORK
Slater Basin
Slater Creek
Hells Kitchen
Brickson Basin North
Brickson Lake
Norway Flat
Norway Creek
Lower Shingle Creek Lake
East Shingle Creek Lake
West Shingle Creek Lake
Big Elk Lake
Beaver Lake
Duck Lake
Fine Lake
Hidden Lake
Lower Yellow Pine
Upper Yellow Pine
Lower Provo River
Provo River
Provo Hill
Bourdette Creek
North Fork
Fitt and Page
Rock Creek
Duchesne Tunnel
Cobbles
Ducheser
Lambert Hol

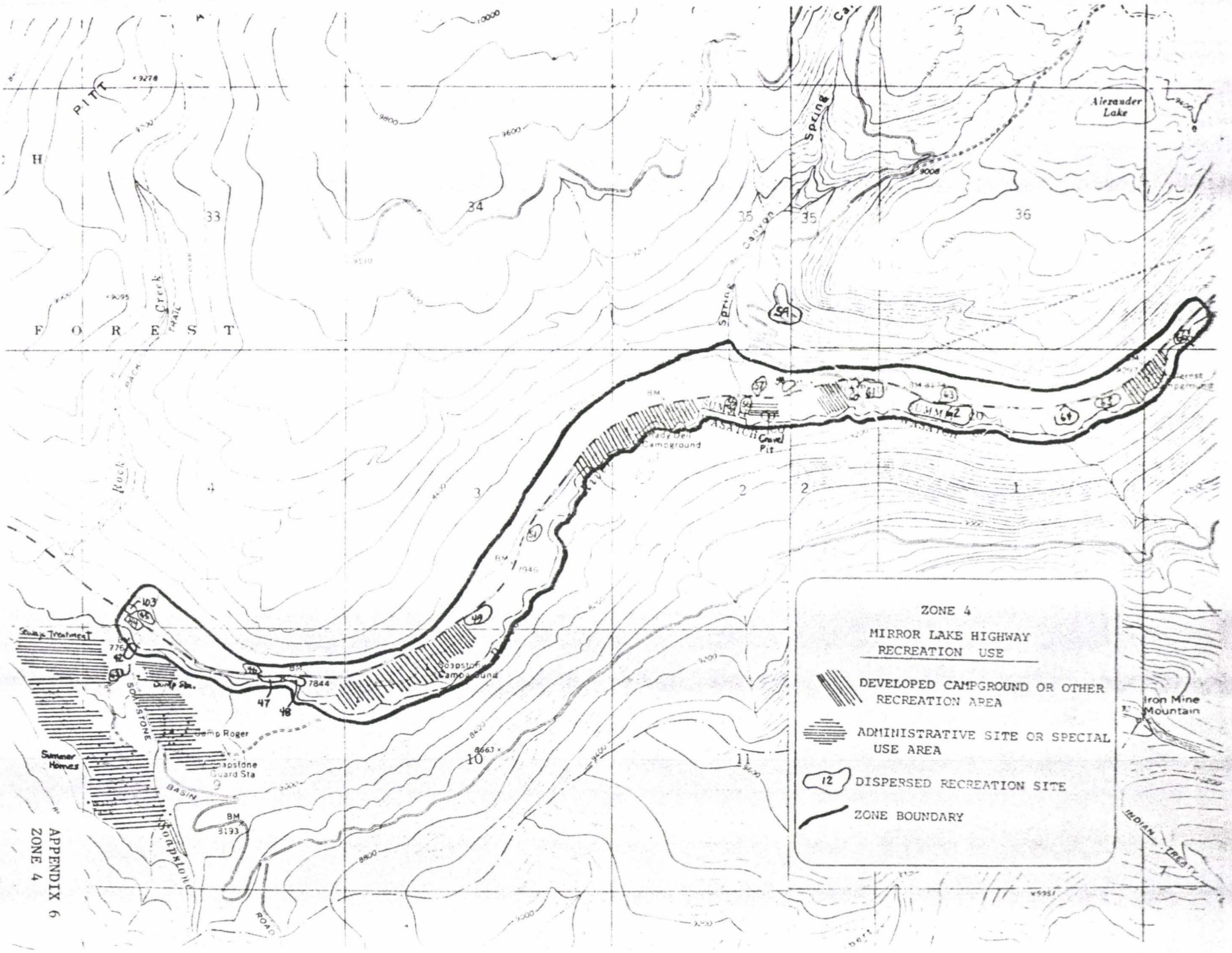


APPENDIX
ZONE 1

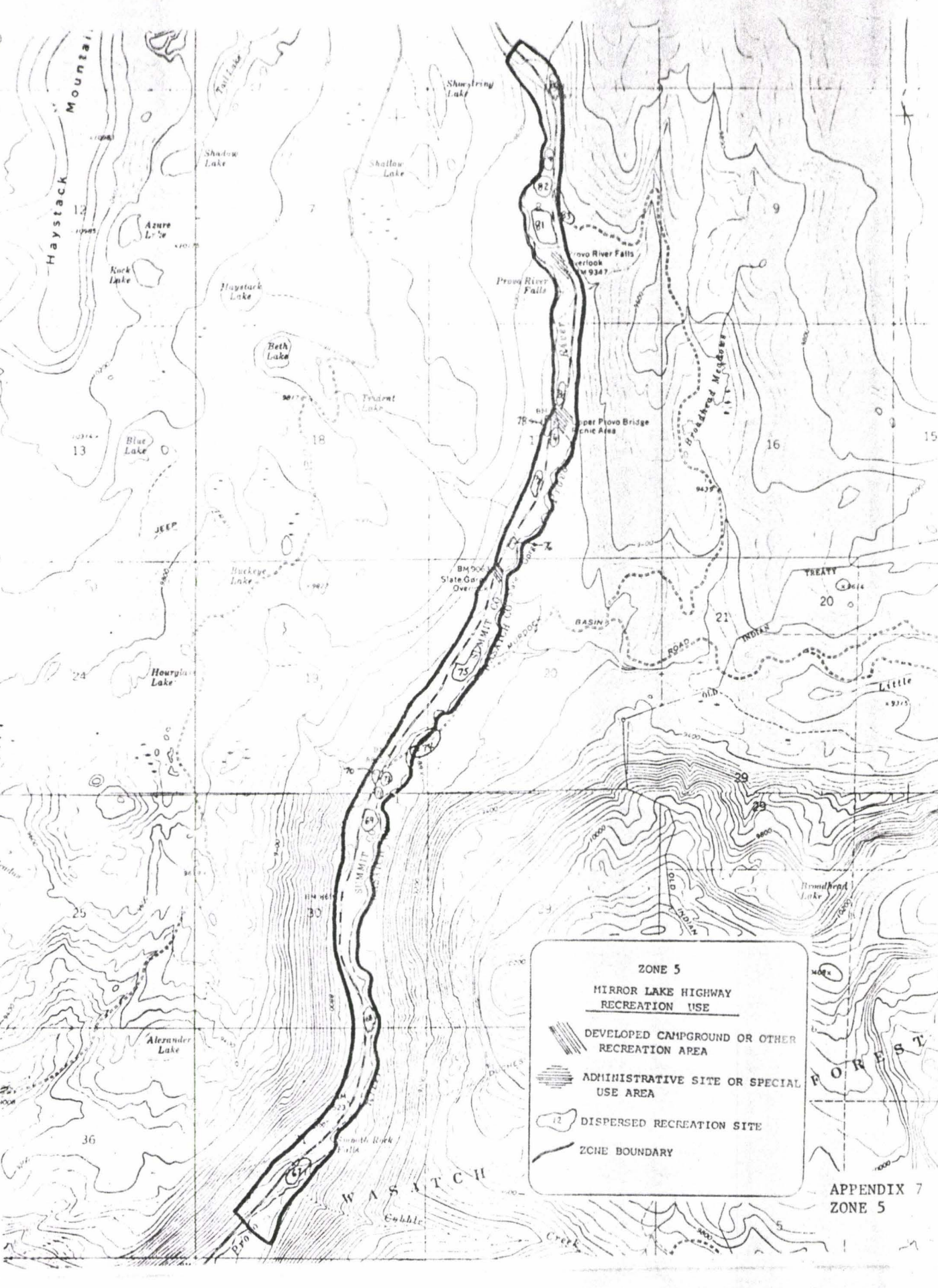


APPENDIX 4
ZONE 2

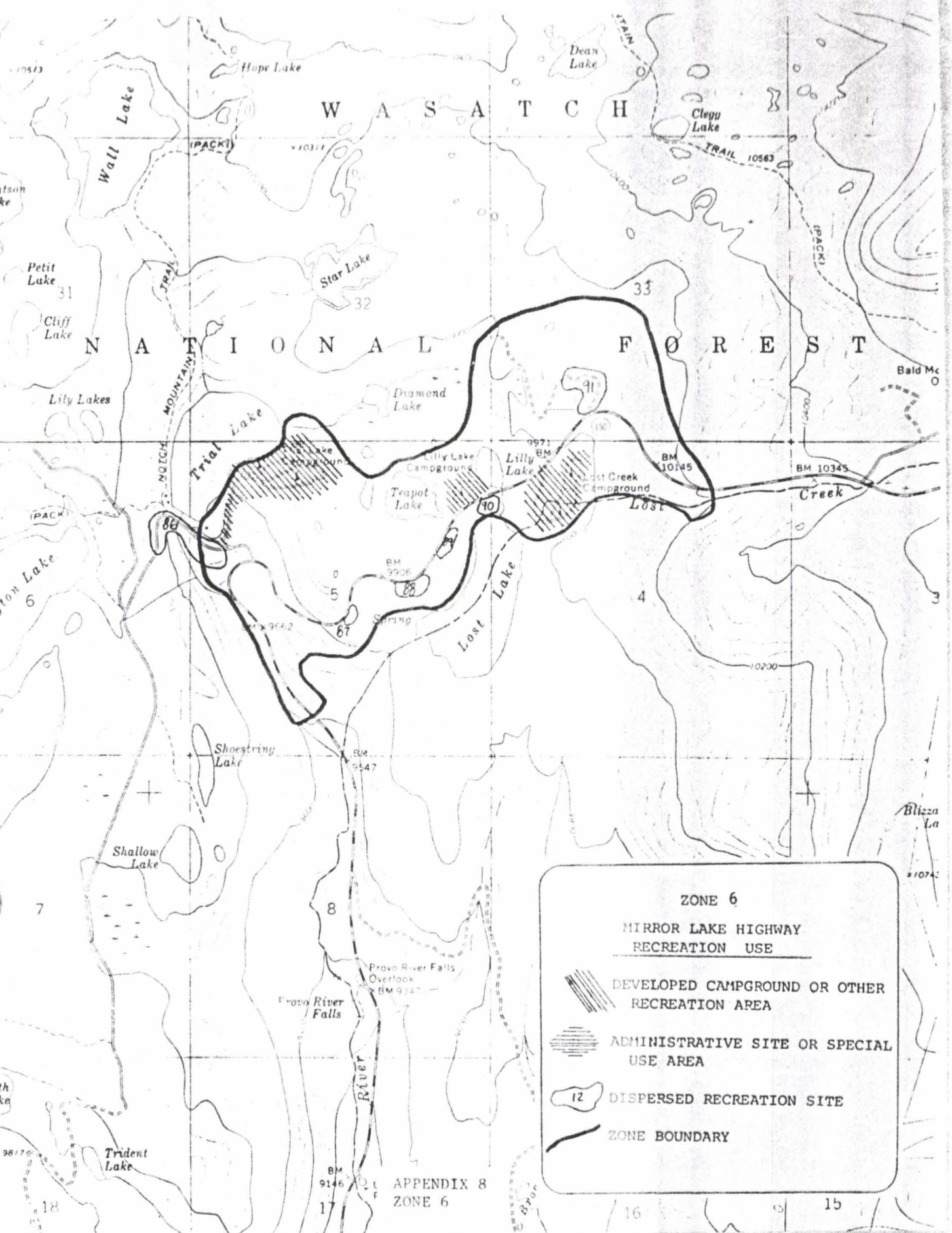

ZONE 3
MIRROR LAKE HIGHWAY
RECREATION USE
DEVELOPED CAMPGROUND OR OTHER RECREATION AREA
ADMINISTRATIVE SITE OR SPECIAL USE AREA
12 DISPERSED RECREATION SITE
ZONE BOUNDARY
APPENDIX 5
ZONE 3
N A T I O N A L F O R E S T
W A S A T C H
PACK TRAIL
Boulder Creek
North Fork
Provo River
Overlook
Gaging Sta
Rock Creek
Sewage Disposal Plant
Dump Station
SOAPSTONE
Camp Roger
Guard Sta
BASIN
Summer Homes
Water Tank
BM 8193
BM 7762
BM
PITT
AND



APPENDIX 6
ZONE 4



APPENDIX 7
ZONE 5



APPENDIX 8
ZONE 6

MIRROR LAKE HIGHWAY

INDIVIDUAL DISPERSED SITE CAPACITIES

ZONE	DISPERSED SITE	SEEN FROM HIGHWAY	CAMPSITES	DISPERSED CAPACITY
1	2	*	10	50
	3	*	8	40
	4	*	8	40
	5		10	50
	6		12	60
	7		10	50
	8		2	10
	9		8	40
	10	*	6	30
	11		2	10
	12	*	3	15
	13		2	10
	14		3	15
	15	*	5	25
	16	*	5	25
	17	*	10	50
	18		3	15
	19		3	15
	100	*	8	40
	101	*	8	40
	102	*	2	10
		TOTAL CAPACITY		640
2	20	*	12	60
	22	*	23	115
	23		3	15
	25	*	14	70
	26	*	3	15
	27		7	35
	28	*	6	30
	29	*	8	40
	30		4	20
	31		3	15
	32	*	3	15
	33	*	8	40
		TOTAL CAPACITY		470
3	34		4	20
	35	*	8	40
	36		3	15
	37		3	15
	38	*	8	40
	39	*	5	25
	40	*	15	65
	41	*	12	60
	104	*	5	25
		TOTAL CAPACITY		305
4	42		9	45
	44	*	10	50
	45		6	30
	46	*	2	10
	47	*	4	20
	48	*	2	10
	49	*	8	40
	51	*	6	30
	55	*	5	25
	56	*	4	20
	57	*	7	35
	58	*	3	15
	60	*	2	10
	61		8	40
	62	*	18	90
	63	*	10	50
	64		6	30
	65	*	5	25
	66	*	6	30
	103		4	20
		TOTAL CAPACITY		625
5	67	*	7	35
	68	*	5	25
	69	*	4	20
	70	*	2	10
	71	*	5	25
	73	*	5	25
	75	*	10	50
	76	*	2	10
	77	*	17	85
	78	*	10	50
	79	*	2	10
	80	*	9	45
	81	*	6	30
	82	*	7	35
	84	*	6	30
	85	*	5	25
		TOTAL CAPACITY		510
6	86		22	110
	87		2	10
	88	*	6	30
	89	*	2	10
	90	*	7	35
	91	*	8	40
		TOTAL CAPACITY		235

APPENDIX 9
DISPERSED SITE CAPACITIES

MIRROR LAKE HIGHWAY
TOTAL RECREATION CAPACITY

ZONE	ACRES	HIGHWAY MILES	CAPACITIES IN PAOT DEVELOPED SITES	DISPERSED SITES	TOTAL CAPACITY	MAXIMUM THEORETICAL CAPACITY*
1	527	4.8	670	640	1310	1054
2	712	2.5	380	470	850	1424
3	160	2.0	30	305	335	320
4	338	4.7	630	625	1255	676
5	189	5.5	90	510	600	378
6	548	2.5	595	235	830	1096
TOTALS	2474 ac	22.0 mi	2395 PAOT	2770 PAOT	5165 PAOT	4948 PAOT

*Based on 2.0 PAOT/acre determined from ROS User's Guide and discussion with C.Ostergaard, W-C N.F.

APPENDIX 10
TOTAL RECREATION CAPACITY

RANDOM NUMBERS
1001-256999

SEQ	NUMBER
1	76804
2	138087
3	60683
4	513935
5	56491
6	343014
7	107060
8	515700
9	175076
10	118872
11	372273
12	376580
13	200690
14	167456
15	372054
16	510131
17	440290
18	114457
19	130025
20	316737
21	124725
22	130577
23	214824
24	197048
25	85859
26	378788
27	125166
28	60353
29	91823
30	498698
31	426596
32	340583
33	437199
34	102184
35	99110
36	414123
37	359023
38	482139
39	220785
40	171432
41	167347
42	145154
43	308897
44	41803
45	145926
46	334842
47	388616
48	465353
49	67530
50	167455
51	495939
52	278091
53	231384
54	335507
55	131129
56	478853
57	407163
58	467782
59	389276
60	329930
61	362999
62	203890
63	245738
64	358052
65	393420
66	244082
67	264510
68	442859
69	269809
70	218686
71	473857
72	477497
73	289684
74	396861
75	372493
76	369734
77	221338
78	112029
79	10837
80	19282
81	359025
82	12215
83	504106
84	42246
85	479817
86	451882
87	371171
88	57040
89	28223
90	351184
91	275331
92	476172
93	494169
94	137864
95	517356
96	397336
97	329853
98	238119
99	346658
100	525420
101	90938
102	32972
103	48538
104	483019
105	345113
106	467341
107	459500
108	443951
109	61349
110	391153
111	283942
112	46220
113	331642
114	236794
115	349085
116	510403
117	134442
118	435101
119	424608
120	409261
121	30653
122	346987
123	284827
124	450780
125	51631
126	418760
127	218138
128	254461
129	253373
130	8240
131	317576
132	525195
133	76143
134	74264
135	443383
136	369953
137	147030
138	2498
139	273123
140	484344
141	471203
142	208309
143	307569
144	500245
145	34848
146	68081
147	330319
148	54172
149	450227
150	18839
151	92486
152	365095
153	166243
154	477498
155	424389
156	22812
157	270253
158	300175
159	42790
160	243199
161	264066
162	434881
163	296749
164	134771
165	194508
166	256450
167	434106
168	394688
169	82106
170	194175
171	216812
172	128371
173	492405
174	153984
175	467450
176	23696
177	399215
178	34075
179	435430
180	257555
181	364985
182	259097
183	412243
184	452543
185	428806
186	208528
187	172205
188	260645
189	87848
190	310110
191	3712
192	363550
193	434107
194	462040
195	212175
196	403961
197	439846
198	39156
199	26896
200	23036
201	150343
202	520558
203	290568
204	425823
205	112580
206	234366
207	229397
208	212947
209	368742
210	128589
211	148796
212	64551
213	419090
214	112250
215	340254
216	143604
217	296529
218	74265
219	50088
220	102091
221	38602
222	454752
223	94693
224	87514
225	203120
226	95907
227	251481
228	276764
229	296531
230	478380
231	283941
232	304810
233	345552
234	453649
235	494390
236	333076
237	393915
238	443268
239	121411
240	527625
241	465241
242	357809
243	520229
244	3161
245	72168
246	87735
247	398331
248	500466
249	297412
250	74709
251	58037
252	75151
253	122517
254	206101
255	315740
256	477279
257	105293
258	392481
259	427040
260	287567
261	280189
262	524312
263	149239
264	196385
265	152109
266	515259
267	306466
268	371942
269	280410
270	258877
271	149679
272	452103
273	173088
274	187549
275	493727
276	73383
277	386406
278	204114
279	58475
280	454754
281	431456
282	203673
283	196052
284	179824
285	339593
286	85969
287	145041
288	464470
289	140626
290	289575
291	204666
292	423397
293	397007
294	176951
295	138415
296	219573
297	85639
298	183576
299	254795
300	14422

Dear Sir or Madam,

We need your opinion to help determine how the Mirror Lake Highway east of Kamas, Utah, is to be managed in the future. You have been selected at random from residents of Salt Lake City and surrounding communities to participate in this survey. Your answers are very important to us so please fill out the survey and return to us in the enclosed self-addressed envelope.

If you are not familiar with the Mirror Lake Highway or have no interest in the recreation management along it, please note that on the form and return it to us anyway.

Thank you for your participation. Feel free to call me at 783-4338 if you have any questions or concerns.

Sincerely,

David F. Swank

David F. Swank
Recreation Forester

APPENDIX 12
SLC QUESTIONAIRE COVER LETTER

APPENDIX 13
RANDOM SLC QUESTIONAIRE

College of Forest and Recreation Resources
DEPARTMENT OF PARKS, RECREATION AND TOURISM MANAGEMENT
263 LEHOTSKY HALL • CLEMSON, SOUTH CAROLINA 29634-1005 • TELEPHONE 803/656-3400

CLEMSON UNIVERSITY

MIRROR LAKE HIGHWAY
PUBLIC OPINION SURVEY

This survey is in cooperation with Clemson University. We want your opinion. These statements are part of a study to determine public opinion about the Mirror Lake Highway. Please respond to each statement.

Indicate how much you agree or disagree with each of the following statements by circling the number that reflects your feelings. The "campsites" referred to are those not in an established campground (with tables, toilets, etc.). The "Highway" is between Yellow Pine Campground and Bald Mountain Pass.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I believe people should be allowed to camp wherever they want along the Mirror Lake Highway.	1	2	3	4	5
2. I wish camping along the Highway would be restricted to designated campgrounds only.	1	2	3	4	5
3. I have noticed a few "worn-out" campsites along the Mirror Lake Highway.	1	2	3	4	5
4. I have noticed many "worn-out" campsites along the Mirror Lake Highway.	1	2	3	4	5
5. I am satisfied with the way the Forest Service is managing the Mirror Lake Highway.	1	2	3	4	5
6. I have noticed a few side roads along the Highway.	1	2	3	4	5
7. I have noticed many side roads along the Highway.	1	2	3	4	5
8. The unpaved side roads are unattractive and disturb me.	1	2	3	4	5
9. The Highway isn't crowded.	1	2	3	4	5
10. I like to come up here to get away from the crowds of people where I live.	1	2	3	4	5
11. Too many people camp along the Highway.	1	2	3	4	5
12. I think campers within view of the highway detract from the scenic quality.	1	2	3	4	5

Please give us the following additional information:

Age (circle years): 18-25 26-35 36-45 46-55 56-65 66+

Gender: Female Male

Years Camping: _____ years

Years Camping along Mirror Lake Highway: _____ years

I usually camp: 1. By myself 2. With family 3. With friends

Type of camping: 1. Tent 2. Pickup camper 3. Trailer 4. RV

I usually camp for how many days at one time: _____ days

The reason I camp: 1. Annual vacation 2. Holiday weekend
3. To get away for a few days 4. Family reunion
5. Other (please specify) _____

APPENDIX 14
ON-SITE USERS QUESTIONAIRE

College of Forest and Recreation Resources
DEPARTMENT OF PARKS, RECREATION AND TOURISM MANAGEMENT
263 LEHOTSKY HALL • CLEMSON, SOUTH CAROLINA 29634-1005 • TELEPHONE 803/656-3400

CLEMSON UNIVERSITY

MIRROR LAKE HIGHWAY
PUBLIC OPINION SURVEY

This survey is in cooperation with Clemson University. We want your opinion. These statements are part of a study to determine public opinion about the Mirror Lake Highway. Please respond to each statement.

Indicate how much you agree or disagree with each of the following statements by circling the number that reflects your feelings. The "campsites" referred to are those not in an established campground (with tables, toilets, etc.). The "Highway" is between Yellow Pine Campground and Bald Mountain Pass.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I believe people should be allowed to camp wherever they want along the Mirror Lake Highway.	1	2	3	4	5
2. I wish camping along the Highway would be restricted to designated campgrounds only.	1	2	3	4	5
3. I have noticed a few "worn-out" campsites along the Mirror Lake Highway.	1	2	3	4	5
4. I have noticed many "worn-out" campsites along the Mirror Lake Highway.	1	2	3	4	5
5. I am satisfied with the way the Forest Service is managing the Mirror Lake Highway.	1	2	3	4	5
6. I have noticed a few side roads along the Highway.	1	2	3	4	5
7. I have noticed many side roads along the Highway.	1	2	3	4	5
8. The unpaved side roads are unattractive and disturb me.	1	2	3	4	5
9. The Highway isn't crowded.	1	2	3	4	5
10. I like to come up here to get away from the crowds of people where I live.	1	2	3	4	5
11. Too many people camp along the Highway.	1	2	3	4	5
12. I think campers within view of the highway detract from the scenic quality.	1	2	3	4	5

PLEASE LOOK AT PICTURE #1

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I would like to camp in this site.	1	2	3	4	5
2. I do not mind seeing this type of site along the Mirror Lake Highway.	1	2	3	4	5
3. I wish the Forest Service would rehabilitate this campsite and not allow camping there.	1	2	3	4	5

PLEASE LOOK AT PICTURE #2

1. I would like to camp in this site.	1	2	3	4	5
2. I do not mind seeing this type of site along the Mirror Lake Highway.	1	2	3	4	5
3. I wish the Forest Service would rehabilitate this campsite and not allow camping there.	1	2	3	4	5

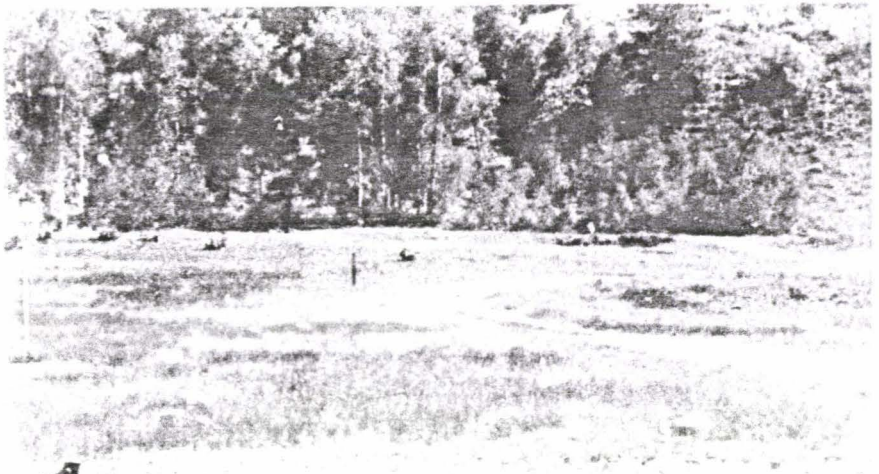
PLEASE LOOK AT PICTURE #3

1. I would like to camp in this site.	1	2	3	4	5
2. I do not mind seeing this type of site along the Mirror Lake Highway.	1	2	3	4	5
3. I wish the Forest Service would rehabilitate this campsite and not allow camping there.	1	2	3	4	5

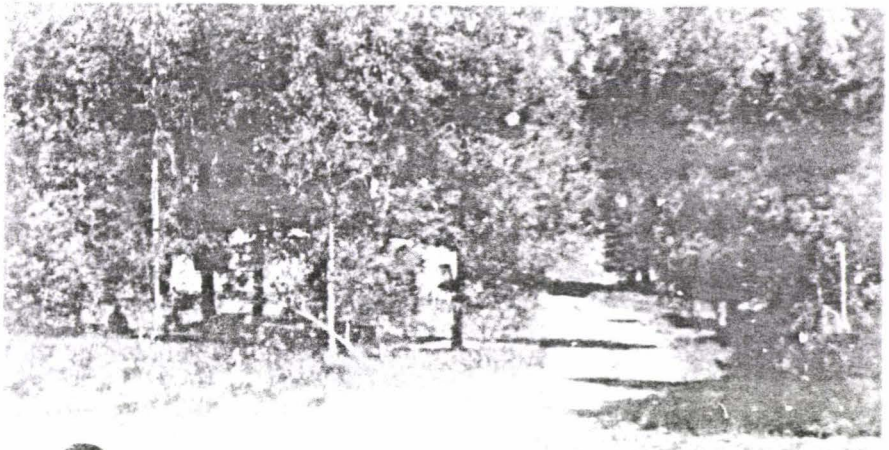
PLEASE LOOK AT PICTURE #4

1. I do not mind seeing this type of road along the Mirror Lake Highway.	1	2	3	4	5
2. I wish the Forest Service would close this type of road and not allow vehicles in that area.	1	2	3	4	5

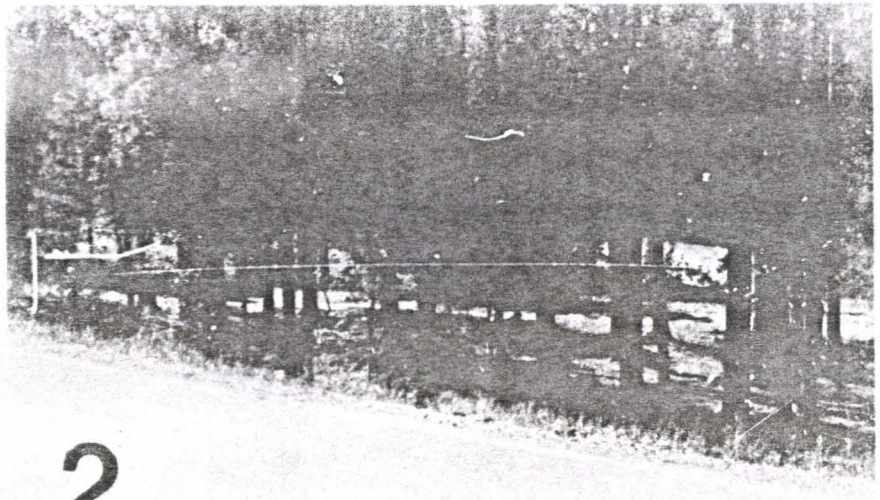
prinz



1



3



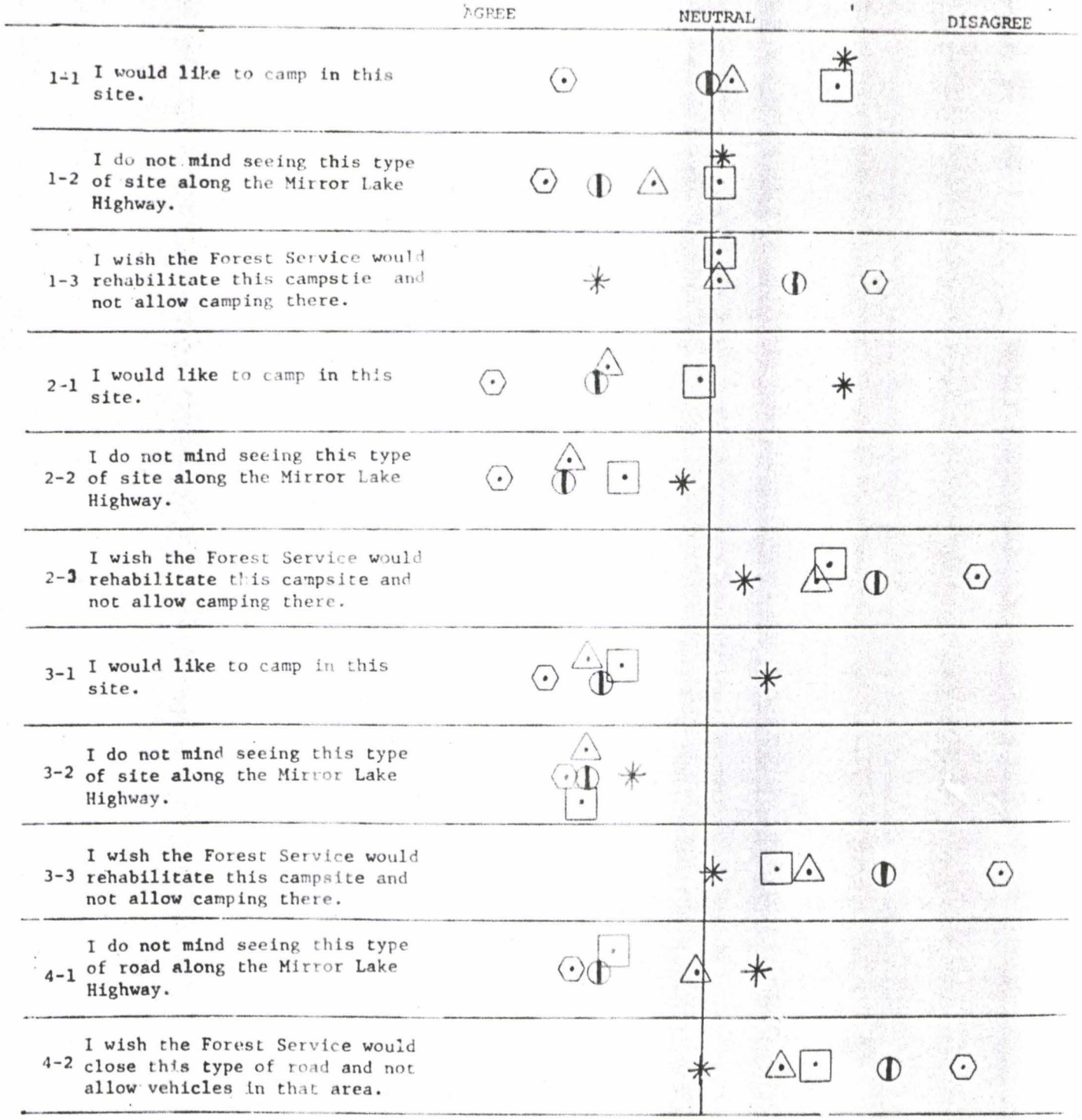
2

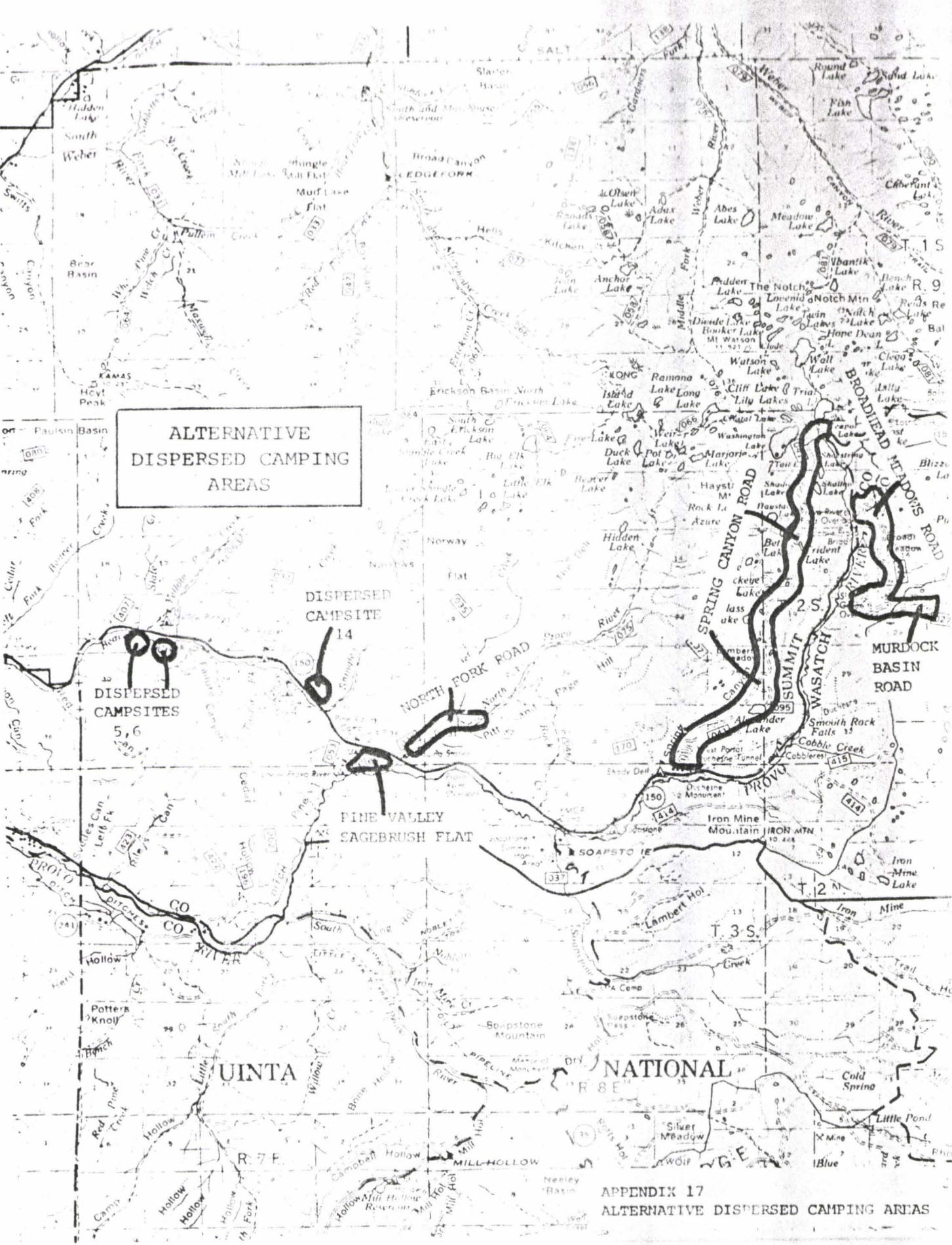
4

RESPONSES TO PHOTOGRAPH STATEMENTS

MEAN AVERAGES OF GROUP RESPONSES

All Groups | Dispersed Campers | Developed Site Campers | Non-Campers | Land Managers


AGREE
NEUTRAL
DISAGREE
1-1 I would like to camp in this site.
1-2 I do not mind seeing this type of site along the Mirror Lake Highway.
1-3 I wish the Forest Service would rehabilitate this campstie and not allow camping there.
2-1 I would like to camp in this site.
2-2 I do not mind seeing this type of site along the Mirror Lake Highway.
2-3 I wish the Forest Service would rehabilitate this campsite and not allow camping there.
3-1 I would like to camp in this site.
3-2 I do not mind seeing this type of site along the Mirror Lake Highway.
3-3 I wish the Forest Service would rehabilitate this campsite and not allow camping there.
4-1 I do not mind seeing this type of road along the Mirror Lake Highway.
4-2 I wish the Forest Service would close this type of road and not allow vehicles in that area.



APPENDIX 17
ALTERNATIVE DISPERSED CAMPING AREAS